

**Candida spp. infections after abdominal urgent surgery: comparative analysis of histologic data for which microbiological results were positive for Candida spp.**V. Rodolico<sup>1</sup>, G. Gulotta<sup>1</sup>, L. Montana<sup>1</sup>, G. Salamone<sup>1</sup>, D.C. Paola<sup>1</sup><sup>1</sup>Department of Sciences for Health Promotion and Mother Child Care, Palermo, Italy

**Objectives:** Microbiological identification is justified when the yeast is isolated from a sterile site, the potential clinical impact of identified isolates from non sterile sites such as intra- abdominal organs don't help the clinicians to determine whether the strain isolate represents contamination, colonization, or true infection. To investigate the contribute of histopathological investigations in surgical patients who survive the initial postoperative period we compare histological and microbiological results positive for *Candida* spp. **Methods:** A retrospective study of abdominal intraoperative tissue or biopsy specimens obtained from patients admitted for acute abdomen with post-operative microbiological samples positive for *Candida* spp was performed for the years January 2008 to December 2012. Specimens obtained from autopsy cases were excluded. For each case, demographic data, mortality, comorbidity conditions, antimicrobial therapy, specimen type, the use of special histologic stains, any reported suggestion to correlate with or defer to microbiology, and the individual surgical pathologist were recorded. **Results:** we evaluated 66 positive candida spp culture reports of which 56 had a concurrent surgical pathology specimen; of the 56 cases 5 were excluded because of a known history of fungal infection, among the remaining we selected 23 (15%) histological results because in these patients clinical, microbiological and eventual other histopathological follow-up data were available. Table 1 showed microbiological and histopathological data. When other than blood culture specimens such as drainage were positive for candida infection the result was suitable with histological picture. On the other hand, when the blood culture was positive the histopathological results (proliferative and granulomatous inflammation accompanied by numerous macrophages, lymphocytes, plasma cells and neutrophils) were compatible with the patients' complications to confirm that *Candida* spp. is a frequent opportunistic pathogen especially in cancer disease. In table we showed comparative analysis of 23 histologic data for which microbiological results were positive for *Candida* spp.

| Microbiological Specimen Positive for <i>Candida</i> spp | (n) | Concorde Histological features | Candida specie                 | Comorbidity                                     | Outcome (Died)      |
|--|-----|--------------------------------|--------------------------------|---|---------------------|
| Blood  | 6   | 1                              | C. albicans=3C. non-albicans=3 | Cancer=5; Cholecistitis=1                       | 3 (c. albican=2)    |
| Bile   | 4   | /                              | C. albicans=1C. non albicans=3 | Cancer=2Chronic gastritis plus cholecystitis =2 |                     |
| Drainage   | 6   | 6                              | C. albicans=4C. non albicans=2 | Cancer= 4Fistula=2                              | 3 ( c. albicans)    |
| Biopsy   | 4   | 4                              | C. albicans=4C. non albicans=  | Cancer=2Fistula=2                               | 1 (c. non albicans) |
| Urine  | 1   | 1                              | C. albicans                    |   |                     |
| Bile plus blood  | 2   | 2                              | C. albicans                    |   |                     |

**Conclusions:** Post- operative *Candida* spp infection is an important cause of morbidity and is frequently associated with poor prognosis, particularly in higher risk patients. Complicated intra-abdominal infections diagnosis is mainly a clinical diagnosis, therefore, low expansive supplemental procedures for diagnosis, such as histopathology examination provide insight into the diagnostic significance of *Candida* spp isolated from surgical specimens other than blood samples.